



PATENT APPLICATION
Docket No.: 14917.1.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of)
)
James E. Moon, et al.)
)
Serial No.: 09/698,329)
) Art Unit
Filed: October 27, 2000) 1741
)
For: INTEGRATED MONOLITHIC)
)
MICROFABRICATED ELECTROSPRAY AND)
)
LIQUID CHROMATOGRAPHY SYSTEM)
)
AND METHOD)
)

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. § 1.97

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Please find, pursuant to 37 C.F.R. § 1.98(a)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). While no representation is made that any of these references may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or 103, the enclosed list of references is disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. § 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the enclosed art

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is the closest to the claimed invention (taken in its entirety) of which the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

In accordance with 37 C.F.R. §§ 1.97 and 1.98, a copy of each of the listed references or relevant portion thereof is also enclosed.

In accordance with 37 C.F.R. § 1.98(c), all English translations within the possession, custody, control or availability of anyone designated in 37 C.F.R. § 1.56(c) of each nonenglish reference, if any, are also enclosed.

Statement of Relevance of References Listed
Unaccompanied by English Translation
Under 37 C.F.R. § 1.98(a)(3)

Since all listed references are either in the English language or are accompanied by a translation into English, no concise explanation of relevance is required under 37 C.F.R. § 1.98(a)(3).

Statement of References Previously Disclosed
Under 37 C.F.R. § 1.98(d)

The following listed references are not enclosed because, under 37 C.F.R. § 1.98(d), they were previously cited by or submitted to the Office in application number 09/156,507 filed September 17, 1998, which is relied upon for an earlier filing date under 35 U.S.C. § 120.

U.S. Patent Documents

<u>Patent Number</u>	<u>Issue Date</u>	<u>Name</u>	<u>Class</u>	<u>Sub Class</u>	<u>Date</u>
4,480,259	10/30/84	Kruger, et al.	346	140	07/30/82
4,489,259	12/18/84	White, et al.	318	696	04/29/82

4,490,728	12/25/84	Vaught, et al.	346	1.1	10/07/82
4,590,482	05/20/86	Hay, et al.	346	1.1	12/14/83
5,162,650	11/10/92	Bier	250	288	01/25/91
5,423,964	06/13/95	Smith, et al.	204	180	08/02/93
5,481,110	01/02/96	Krishnaswamy, et al.	250	288	10/07/94
5,501,883	03/26/96	Ishikawa, et al.	428	1	07/27/94
5,523,566	06/04/96	Fuerstenau, et al.	250	282	07/20/94
5,536,939	07/16/96	Freidhoff, et al.	250	281	10/07/94
5,541,408	07/30/96	Sittler	250	288	02/17/95
5,563,639	10/08/96	Cameron, et al.	347	34	10/30/94
5,608,217	03/04/97	Franzen, et al.	250	288	03/10/95
5,640,010	06/17/97	Twerenbold	250	281	05/11/95
5,644,131	07/01/97	Hansen	250	292	05/22/96
5,705,813	01/06/98	Apffel, et al.	250	288	11/01/95
5,716,825	02/10/98	Hancock, et al.	435	286.5	11/01/95
5,747,815	05/05/98	Young, et al.	250	423	07/24/96
5,501,893	03/26/96	Laermer, et al.	428	161	11/27/93
5,750,988	05/12/98	Apffel et al.	250	288	02/03/97
6,032,876	03/07/00	Bertsche et al.	239	418	12/01/98
6,066,848	05/23/00	Kassel et al.	250	288	12/03/98

Foreign Patent Documents

<u>Document Number</u>	<u>Publ. Date</u>	<u>Country or Patent Office</u>	<u>Sub Class</u>	<u>Class</u>	<u>Trans- lation</u>
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EP259,796	01/03/96	Europe	N/A
EP 565,027	03/05/97	Europe	N/A
EP 588,952	09/01/99	Europe	N/A
EP 677, 322	10/18/95	Europe	N/A
EP 692,713	01/17/96	Europe	N/A
EP 860,858	08/26/98	Europe	N/A
GB 2,287,356	09/13/95	Great Britain	N/A
WO 00/52455	09/08/00	PCT	N/A
PCT/US00/34999		PCT	N/A
PCT/US01/01785		PCT	N/A

Other Documents

John H. Knox, "Theoretical Aspects of LC with Packed and Open Small-Bore Columns," Journal of Chromatographic Science, Vol. 18, September, 1980, pages 453-461.

James N. Alexander IV, "Development of a Nano-electrospray Mass Spectrometry Source for Nanoscale Liquid Chromatography and Sheathless Capillary Electrophoresis," Rapid Communication in mass Spectrometry, 12, July, 1998, pages 1187-1191.

Jörg P. Kutter, Stephen C. Jacobson, and J. Michael Ramsey, "Integrated Microchip Device with Electrokinetically Controlled Solvent Mixing for Isocratic and Gradient Elution in Micellar Electrokinetic Chromatography," Analytical Chemistry, Vol. 69, No. 24, December 1997, pages 5165-5171.

Bing He, Niall Talt, Fred Regnier, "Fabrication on Nanocolumns for Liquid Chromatography," Analytical Chemistry, Vol.70, No. 18, September, 1998, Pages 3790-3797.

Matthias S. Wilm, Matthias Mann, "Electrospray and Taylor-Cone theory, Dole's beam of macromolecules at last?," International Journal of Mass Spectrometry and Ion Processes and Ion Processes, June, 1994, pages 167-180.

David C. Gale and Richard D. Smith, "*Small Volume and Low Flow-rate Electrospray Ionization Mass Spectrometry of Aqueous Samples*," Rapid Communications in Mass Spectrometry, Vol. 7, September, 1993, pages 1017-1021.

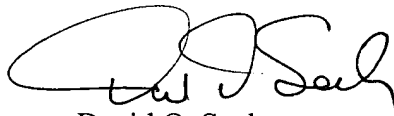
Richard B. Cole, "*Electrospray Ionization Mass Spectrometry*," John Wiley & Sons, Inc., 1997, pages 1-62.

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Dated this 13th day of April, 2001.

Respectfully submitted,



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